WHAT IS CLAIMED IS:

1. An internal combustion engine, comprising:

a cylinder head defining an intake port leading to a cylinder of the engine;

an intake valve located at a downstream end of the intake port;

a flow regulating section to regulate an intake air flow in the intake port, the flow regulating section including;

a partition extending in the intake port in a longitudinal direction of the intake port from an upstream end to a downstream end which is located in the cylinder head, and dividing the intake port into first and second passage sections;

a gas motion control valve located by the upstream end of the partition, to open and close the second passage section; and

a connection passage to allow recirculating flow of intake air in the second passage section from the second passage section to the first passage section when the second passage section is closed by the gas motion control valve; and

a fuel injector directed to inject fuel toward a valve opening of the intake valve through a space on the downstream side of the downstream end of the partition.

2. The internal combustion engine as claimed in Claim 1, wherein the fuel injector is directed to cast a fuel spray across an imaginary extension of the partition toward the valve opening of the intake valve, without impinging on the

partition, through the space on the downstream side of the downstream end of the partition.

3. The internal combustion engine as claimed in Claim 1, wherein the downstream end of the partition is close to an outer boundary of the fuel spray produced by the fuel injector.

4. The internal combustion engine as claimed in Claim 1, wherein the fuel injector is disposed above the partition.

5. The internal combustion engine as claimed in Claim 1, wherein the fuel injector is received in a recess formed in the first passage section of the intake port.

6. The internal combustion engine as claimed in Claim 1, wherein the cylinder of the engine is provided with two of the intake valves, and the fuel injector is arranged to inject fuel to both of the valve openings of the intake valves of the cylinder.

7. The internal combustion engine as claimed in Claim 1, wherein the partition is formed with a groove extending in the longitudinal direction of the intake port.

8. The internal combustion engine as claimed in Claim 7, wherein the groove extends to the upstream end of the partition, and the connection passage is formed between the gas motion control valve and an upstream end of the groove.

9. The internal combustion engine as claimed in Claim 7, wherein the groove extends to the downstream end of the partition and a downstream end of the groove is so depressed as to avoid interference between a fuel spray produced by the fuel injector and the downstream end of the partition.

10. The internal combustion engine as claimed in Claim 9, wherein the downstream end of the groove is depressed so that a fuel spray from the fuel injector passes through a region within the groove at the downstream end of the partition.

11. The internal combustion engine as claimed in Claim 7, wherein the groove extends from the downstream end of the partition to the upstream end of the partition.

12. The internal combustion engine as claimed in Claim 11, wherein a cross section of the groove is uniform from the downstream end of the partition to the upstream end of the partition.

13. The internal combustion engine as claimed in Claim 7, wherein the partition includes first and second side portions extending in the longitudinal direction of the intake port, and the groove is formed between the first and second side portions.

14. The internal combustion engine as claimed in Claim 7, wherein the groove is depressed toward the second passage section.

15. The internal combustion engine as claimed in Claim 7, wherein the partition is formed with a plurality of the grooves.

16. The internal combustion engine as claimed in Claim 15, wherein the cylinder of the engine is provided with two of the intake valves; the fuel injector is arranged to produce two fuel sprays directed, respectively, to the valve openings of the intake valves of the cylinder; and the partition is formed with two of the grooves each of which is so depressed as to avoid interference between a unique one of the fuel sprays produced by the fuel injector and the downstream end of the partition.

17. The internal combustion engine as claimed in Claim 1, wherein the gas motion control valve comprises a valve shaft located on an imaginary upstream extension of the partition, and a valve element swingable on the valve shaft, between an open position at which the valve element extends continuously with the partition in the longitudinal direction of the intake port, and a closed position at which the valve element closes the second passage section, and inclines so as to guide an intake air stream from the upstream side, toward the first passage section.

18. The internal combustion engine as claimed in Claim 1, wherein the valve element of the gas motion control valve comprises a first valve portion closing the second passage section, and a second valve portion projecting in the first passage section when the second passage section is closed by the first valve portion.

19. The internal combustion engine as claimed in Claim 18, wherein the second valve portion of the gas motion control valve closes the connection passage at least partly so as to reduce an opening area of the connection passage when the gas motion control valve(31) is in an open position opening the second passage section.

20. The internal combustion engine as claimed in Claim 1, wherein the second passage section is located below the first passage section in an up-down direction of the cylinder of the engine.

21. The internal combustion engine as claimed in Claim 1, wherein the gas motion control valve is arranged to reduce an open sectional area of the intake port to produce a low pressure region in the first passage section of the intake port; and the connection passage connects an upstream end portion of the second passage section to the low pressure region produced in the first passage section to promote recirculating flow of intake air in the second passage section from a downstream end of the second passage section to the upstream end portion of the second passage section, and from the upstream end portion to the

first passage section when the second passage section is closed by the gas motion control valve.

22. The internal combustion engine as claimed in Claim 1, wherein the connection passage is in the form of a slit elongated in a direction perpendicular to the longitudinal direction of the intake port.

23. The internal combustion engine as claimed in Claim 1, wherein the connection passage is in the form of an interspace between the upstream end of the partition and the gas motion control valve in a closed position closing the second passage section.

24. An intake apparatus for an internal combustion engine, comprising:

first means for defining an intake port;

second means for dividing the intake port into first and second passage sections extending in a longitudinal direction of the intake port;

third means for closing an upstream end of the second passage section and forming a low pressure region in the first passage section;

fourth means for drawing intake air from a downstream end of the second passage section through the second passage section to the low pressure region in the first passage section when the upstream end of the second passage section is closed; and

fifth means for injecting fuel in an oblique direction extending from the first passage section to the second

passage section through a space between the partition and the downstream end of the intake port.